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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,637	12/05/2003	Raymond R. Blasing	SFV 303	8416

23581 7590 09/19/2005

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EXAMINER

BARKER, MATTHEW M

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/728,637		BLASING ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Matthew M. Barker		3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
     4a) Of the above claim(s) 1-4, 10, 11, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-9, 12-15, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

I. An imaging system, system of imaging, and method of imaging having a plurality of interrogation segments, each segment with it's own transceiver, with respect to claims 1-4, 10-11, and 16-17.

II. An imaging system, system of imaging, and method of imaging having a plurality of antenna array segments with one transceiver to operate the array, with respect to claims 5-8, 12-15, and 18-19.

2. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claim 9 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

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are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. During a telephone conversation with Edward Anderson on September 2, 2005 a provisional election was made without traverse to prosecute the invention of II, claims 5-9, 12-15, and 18-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-4, 10-11, and 16-17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Claim Objections***

5. Claim 7 is objected to because of the following informalities: The term "array" is previously used to describe several different parts of the invention. It is unclear which

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claim 6 refers to. For the purposes of examination, it is read as --antenna array--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 5, 9, 12, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by McMakin.

Regarding claim 5, see Figure 8. McMakin discloses an imaging system comprising an array frame (532). McMakin shows only one antenna array segment (536), inherently including a segment frame mounted to the array frame, but teaches that an imaging system may include a plurality of antenna array segments (paragraph 10, lines 1-3). Inherently, the imaging system of Figure 8 may include a plurality of antenna array segments.

The “elements” disclosed by McMakin are equivalent to the claimed “antenna units” (see paragraph 44, lines 13-16). A plurality of antenna units mounted relative to the segment frame transmit toward and receive from the subject (B) in the subject position, electromagnetic radiation in a frequency range of 200 MHz to 1 THz (paragraph 10). The array frame and array segments with the antenna units form an antenna array.

McMakin discloses a transceiver (42) to operate each antenna array (Figure 1), and a processor (44) to convert the transceiver output into image data (paragraph 10).

Regarding claim 9, McMakin discloses an antenna array segment (536), including a plurality of antenna units mounted relative to a segment frame that transmit toward and receive from the subject in the subject position (See paragraph 69, lines 7-12 and Figure 9), electromagnetic radiation in a frequency range of 200 MHz to 1 THz (paragraph 10).

The array segment is adapted to be mounted on an array frame (532) with other array segments forming an antenna array as part of an imaging system discussed above.

Regarding claim 12, the claimed method is the inherent method of operation of the system of McMakin, referenced above.

Regarding claim 18, McMakin discloses the claimed system of imaging, including a means for transmitting and scanning the electromagnetic radiation, receiving the reflected radiation (paragraph 69), and a means for producing an output and converting the output into image data (Figure 1 and paragraph 10).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over McMakin. As an alternative to the rejection of paragraph 7 above, if the imaging system of Figure 8 would not inherently include a plurality of antenna array segments, it would have been taught by McMakin in paragraph 10.

It would have been obvious to modify the system of Figure 8 to include multiple antenna array segments as taught in paragraph 10 in order to speed up the imaging process.

10. Claims 6, 7, 8, 13, 14, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMakin in view of Yokoshima.

Regarding claims 6, 13, and 19, Yokoshima teaches in Figures 1 and 2 and paragraphs 59 and 95 a plurality of antenna array segments (1a, 1b) oriented at different angles relative to each other. It would have been obvious to modify the systems and method of McMakin by orienting the antenna segments at different angles as taught by Yokoshima in order to reduce interference between segments.

Regarding claims 7 and 14, McMakin discloses the array extends along an arc (figure 9 and paragraph 69, lines 7-9).

Regarding claims 8 and 15, McMakin does not specify how the antenna units are oriented along the segment frame, however to mount them rectilinearly would have been an obvious and well-known design choice.

11. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMakin in view of Yokoshima as applied to claims 7 and 14 above, and further in view of Witte.

As an alternative to the rejection in paragraph 10 above, Witte teaches the claimed rectilinear arrangement. In the abstract and Figure 1, Witte discloses an imaging system and method using antenna segments (10) arranged rectilinearly to a frame (not drawn). It would have been obvious to include the teaching of Witte in the system and method McMakin in order to achieve optimum alignment and performance of the antenna units.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew M. Barker whose telephone number is (571)272-3103. The examiner can normally be reached on M-F, 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.




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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*MMB*

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